SAFONOV, V.V.; KORSHUNOV, B.G.; SHEVTSOVA, Z.N.

Interaction of niobium (IV) chloride with rubidium and cesium chlorides in melts. Zhur. neorg. khim. 7 no.8:1979-1982 Ag '62. (MIRA 16:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

(Niobium chloride)
(Alkali metal chlorides)

SAFONOV, V.V.; KORSHUNOV, B.G.; SHEVTSOVA, Z.N.; SHADROVA, L.G.

Interaction of tantalum tetrachloride with rubidium and cesium chlorides. Zhur. neorg. khim. 9 no.6:1406-1410 Je '63
(MIRA 17:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

SAFONOV, .V.; KORSHUNOV, B.G.; SHEVTSOVA, Z.N.; BAKUM, S.I.

Interaction of tantalum trichloride with fused alkali metal chlorides. Zhur. neorg. khim. 9 no.7:1687-1691 Jl '64. (MIRA 17:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

L 44318-65 EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWP(t)/EWP(b) Pr-4/Pt-7/Pu-4
IJP(c) JD/JG

ACCESSION NR: AP5008483 S/0078/65/010/003/0669/0671

AUTHOR: Safonov, V. V.; Korshunov, B. G.; Shevtsova, Z. N.; Shadrova, L. G. 39 38 13

TITLE: Reaction of tantalum tetrachloride with sodium and potassium chlorides
27 27 27 27

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 3, 1965, 669-671

TOPIC TAGS: potassium compound, tantalum compound, tantalum tetrachloride, sodium chloride, potassium chloride, high purity metal production, niobium tetrachloride, eutectic, complex ion, melt 18 27

ABSTRACT: The reaction of tantalum tetrachloride with sodium and potassium chlorides in melts has been studied because the production of high purity metals by subhalide methods is assuming increasing importance. A thermal analysis of the systems has been made and fusibility diagrams constructed. The $TaCl_4$-NaCl system is of the eutectic type and the eutectic contains 55 mol.% NaCl and melts at 270C. The components of the $TaCl_4$-KCl system form a K_2TaCl_6 compound that melts at 732C. The eutectic formed by K_2TaCl_6 and KCl melts at 590C and contains 75 mol.% KCl, while the eutectic formed by K_2TaCl_6 and $TaCl_4$ melts at 215C and contains about 51 mol.% $TaCl_4$. Unlike $TaCl_4$, the K_2TaCl_6 compound is optically isotropic and has

Card 1/2

L 44318-65

ACCESSION NR: AP5008483

a tendency to decompose in the atmosphere. Its refractive index exceeds 1.789, and its density is 3.017 g/cm^3, as compared with 2.539 g/cm^3 for the similarly obtained niobium compound K_2NbCl_6. The $NaCl_4$ experimental crystallization curve of the $TaCl_4$-NaCl system is in good agreement with the estimated crystallization curve in the range from 0 to 20 mol.% $TaCl_4$, suggesting the possible presence of tantalum in the form of $[Ta_2Cl_{10}]^{2-}$ in the melt. The KCl experimental crystallization curve is also in good agreement with the estimated curve, and it is assumed that the melt contains tantalum in the form of the complex ion $[TaCl_6]^{2-}$. Orig. art. has: 4 figures.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 10Jun64 ENCL: 00 SUB CODE: IC

NO REF SOV: 004 OTHER: 006

Card 2/2

SAFONOV, V.V.; KORSHUNOV, B.G.

System $TaCl_3$ - NaCl - KCl. Zhur. neorg. khim. 10 no.3:672-675 Mr '65. (MIRA 18:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

L 3187-66 EWT(m)/EPF(c)/EPF(n)-2/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AP5008484 S/0078/65/010/003/0672/0675 31 30 B

AUTHOR: Safonov, V.V.; Korshunov, B.G.

TITLE: The tantalous chloride - sodium chloride - potassium chloride system

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 3, 1965, 672-675 21

TOPIC TAGS: alkali metal chloride, potassium chloride, sodium chloride, tantalum chloride, tantalous chloride, tantalum subchloride, melt, fusibility diagram, tantalum production, tantalum

ABSTRACT: This study was carried out for the purpose of obtaining data on the electrolysis of tantalum subchlorides in alkali-metal chloride metl, inasmuch as it is a promising method for the production of high-purity tantalum. A thermographic analysis shows that: 1) the components in the NaCl-KCl system form solid solutions with a minimum at 50 mol.% NaCl and 658 C; 2) the $TaCl_3$- NaCl system is a eutectic containing 55 mol.% NaCl and melting at 220 C; 3) the compound K_2TaCl_5 is formed in the $TaCl_3$-KCl system; 4) the eutectic formed by K_2TaCl_5 and KCl contains 68 mol.% KCl and melts at 520 C; 5) the eutectic formed by K_2TaCl_5 and $TaCl_3$ contains about 50 mol.% KCl and melts at 230 C; and 6) the K_2TaCl_5 compound undergoes poly-

Card 1/3

L 3187-66

ACCESSION NR: AP5008484

morphic transformation at 263 C. Data on five internal sections in the $TaCl_3$-NaCl-KCl ternary system are incorporated in the fusibility diagram (Fig. 1 of the Enclosure). The experimental results show that crystallization fields (solid solution of NaCl and KCl, K_2TaCl_5, and $TaCl_3$) are present on the liquidus surface; that the E_1 point is a eutectic containing 27.7 mol.% $TaCl_3$, 10 mol.% NaCl, and 62.3 mol.% KCl, melting at 516 C, and corresponding to a four-phase equilibrium in the K_2TaCl_5-NaCl-KCl system; that the K_2TaCl_5 compound is of low thermodynamic stability, inasmuch as its crystallization field occupies little space in the phase diagram; and that pulverized samples differ in color with phase composition so that $TaCl_3$-NaCl-K_2TaCl_5 mixtures are dark green, and KCl-NaCl-K_2TaCl_5 mixtures are blue. Orig. art. has: 6 figures.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 10Jun64 ENCL: 01 SUB CODE: IC, SS

NO REF SOV: 006 OTHER: 009

Card 2/3

L 3187-66

ACCESSION NR: AP5008484

ENCLOSURE: 01

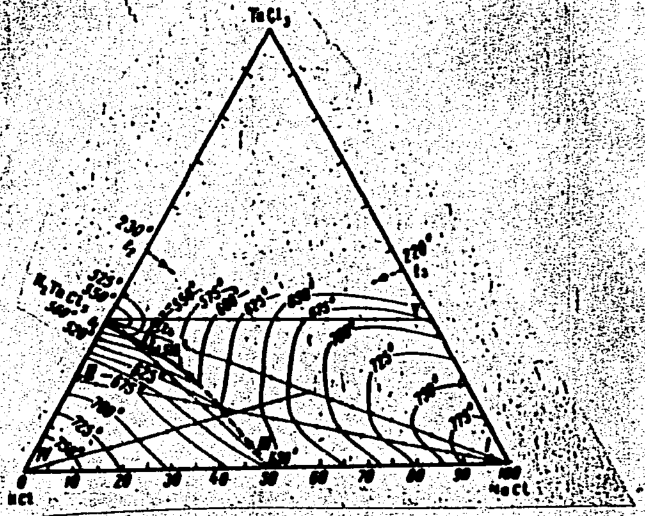

Fig. 1. Fusibility curve of the $TaCl_3$-NaCl-KCl system.

Card 3/3

BOL'SHAKOV, K.A.; SAFONOV, V.V.; KOGAN, L.M.; SHEVTSOVA, Z.N.; SHADROVA, L.G.

Solubility of chloro derivatives of some metals in 1,3-hexachlorobutadiene. Zhur. fiz. khim. 38 no.5:1305-1306 My '64. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova i Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy. Submitted June 7, 1963.

VAGANOV, Viktor Vasil'yevich; SAFONOV, Vladimir Yefimovich; MIRONOV, Georgiy Petrovich; KALASHNIKOV, G.A., red.; SHAKHOVA, L.I., red.izd-va; KUZNETSOVA, A.I., tekhn.red.

[Manual for workers in the exportation of lumber] Posobie dlia rabotnikov po eksportu lesomaterialov. Moskva, Goslesbumizdat, 1960. 203 p. (MIRA 13:4)

(Lumber trade)

5.2400

78213
SOV/80-33-3-14/47

AUTHORS: Kuz'min, A. A., Safonov, Ye. K.

TITLE: Silicon Refining by the Iodide Method

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3, pp 591-597 (USSR)

ABSTRACT: A modification of the F. B. Litton, H. C. Andersen (see U.S. references) method is described. In the present method, the temperature of the apparatus itself is reduced to 100° C whereas in the former it was 400 to 500° C. This is done by placing the charge in a tungsten wire basket, and leaving a space between it and the apparatus walls. The charge temperature remains at 400 to 500° C and that of the tantalum ribbon (heating strip) at 1,050° C. The SiI_4 vapor pressure was 1.2 mm Hg. A schematic diagram of the apparatus is shown in Fig. 1. One of the advantages of the lower wall temperature is the possibility of condensing some of the impurities on them.

Card 1/4

Silicon Refining by the Iodide Method

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SOV/80-33-3-14/47

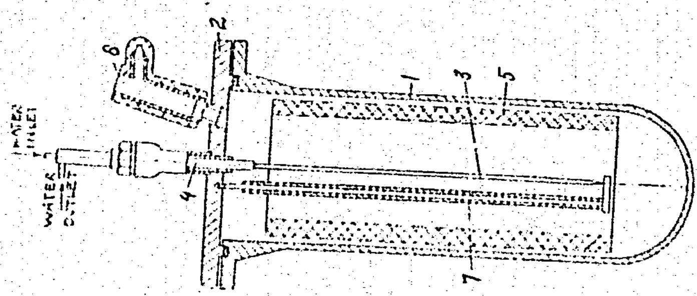

Fig. 1. Apparatus for refining silicon by the iodide method. (1) Body (volume, 3000 cm^3; (overall diameter, 100 mm); (2) teflon cover; (3) heating strip; (4) electric leads; (5) basket with raw material; (6) view tube (and SiI_4 inlet); (7) quartz tube.

Card 2/4

Silicon Refining by the Iodide Method

78213
SOV/80-33-3-14/47

A typical result of the purification is given in Table 1. Thsi method produces silicon suitable for use in solar batteries and may be used for the purification of other elements, for which the required pressure of iodide vapors is lower than that reached at the temperature required for tying up the iodine with the raw material. There are 3 tables; 5 figures;

Table 1. Results of the technical analysis of silicon

SAMPLE	CONTENT OF IMPURITIES (WT % × 10^3)			
	Fe	Al	Ca	Ti
TECHNICAL SILICON..	270	500	300÷400	35
SILICON AFTER REFINING......	5	50	6	8

Card 3/4

Silicon Refining by the Iodide Method 78213
SOV/80-33-3-14/47

and 9 references, 2 Soviet, 4 German, and 3 U.S. The U.S. references are: H. C. Thenerer, Bell Labs Record, 33, 9327 (1955); F. B. Litton, H. C. Andersen, J. Electrochem. Soc., 101, 287 (1954); H. C. Andersen, L. H. Beltz, J. Am. Chem. Soc., 75, 19, 4828 (1953).

SUBMITTED: July 13, 1959

Card 4/4

SAFONOV, Yegor Vasil'yevich; ITUNINA, R.G., red.; SERADZSKAYA, P.G., tekhn.red.

[Getting 185 lambs from 100 ewes] 185 iagniat na 100 ovtsematok. Voronezh, Voronezhskoe knizhnoe izd-vo, 1960. 14 p. (MIRA 14:1)

1. Starshiy chaban kolkhoza "Rossiya" Buturlinovskogo rayona (for Safonov).

(Sheep breeding)

SAFONOV, Yu.D.

Method of recording and analyzing ballistocardiograms in valvular heart diseases. Terap.arkh. 31 no.7:53-60 Jl '59.
(MIRA 12:11)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof.M.N. Tumanovskiy) Voronezhskogo meditsinskogo instituta.
(HEART VALVES diseases)
(BALLISTOCARDIOGRAPHY)

TUMANOVSKIY, M.N.; SAFONOV, Yu.D.

Analysis of time correlations in direct ballistocardiographic rate determination. Klin.med. 38 no.6:60-66 Je '60. (MIRA 13:12)

(BALLISTOCARDIOGRAPHY)

TUMANOVSKIY, M.N., prof.; SAFONOV, Yu.D. (Voronezh)

Method for registering and principles for the classification of ballistocardiograms. Klin.med. 38 no.8:99-106 Ag '60.
(MIRA 13:11)

1. Iz kliniki fakul'tetskoy terapii (zav. - prof. M.N. Tumanovskiy) Voronezhskogo meditsinskogo instituta.
(BALLISTOCARDIOGRAPHY)

SAFONOV, Yu. D.

Cand Med Sci - (diss) "Clinical significance of ballistocardiography and vectorballistocardiography in several cardiovascular affections (valvular defects of the heart, coronary insufficiency)." Rostov-na-Don, 1961. 22 pp; (Rostov-na-Don State Med Inst); 300 copies; price not given; (KL, 7-61 sup, 262)

SAFONOV, Yu;D.

Diagnostic significance of ballistocardiographic changes in disorder of the heart rhythm and conductivity in mitral stenosis and arteriosclerctic cardiosclerosis. Kardiologiia 2 no.2:38-44 Mr-Ap '62;
(MIRA 15:4)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof. M.N. Tumanovskiy) Voronezhskogo meditsinskogo instituta.

(BALLISTOCARDIOGRAPHY) (ARRHYTHMIA)
(MITRAL VALVE--DISEASES) (HEART--DISEASES)

L 07448-67

ACC NR: AP6035875 SOURCE CODE: UR/0413/66/000/020/0097/0097

AUTHOR: Lube, V. M.; Safonov, Yu. D.; Yakimenko, L. I.; Devochkin, I. V.; Doneta, A. M.

24

B

ORG: none

TITLE: Device for studying cardiac activity. 22 Class 30, no. 187215

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 97

TOPIC TAGS: human physiology, cardiovascular system, bioinstrumentation

ABSTRACT: An Author Certificate has been issued for a device for studying cardiac activity consisting of an ultrasonic generator, a piezoelectric sensor with con-

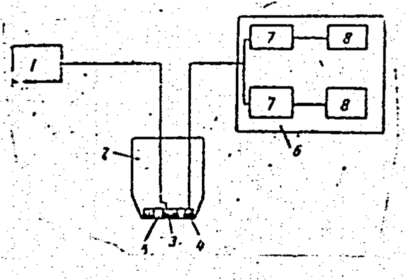

Fig. 1. A device for studying cardiac activity

1 - Ultrasonic generator; 2 - piezoelectric sensor;
3 - transmitting unit; 4 - receiving unit;
5 - annular gap; 6 - ultrasonic receiver;
7 - filters; 8 - recorders.

Card 1/2 UDC: 615.47:612.171.1

L 07448-67

ACC NR: AP6035875

centric transmitting and receiving units, and an ultrasonic receiver with a selection system and recorder (see Fig. 1). The selection system includes two filters at different frequencies for recording the character of cardiac muscle and heart valve movements. To increase sensitivity the concentric receiving and transmitting elements of the piezoelectric sensor are separated by an annular gap. Orig. art. has: 1 figure.

SUB CODE: 06, 14/ SUBM DATE: 15Apr65/ ATD PRESS: 5104

Card 2/2

TUMANOVSKIY, Mikhail Nikolayevich; SAFONOV, Yuriy Dmitriyevich;
ERINA, Ye.V., red.

[Functional diagnosis of cardiac diseases] Funktsional'naia diagnostika zabolevanii serdtsa. Moskva, Meditsina, 1964. 407 p. (MIRA 17:11)

FATALIYEV, Khalil' Magomedovich[deceased]; NOVOSEL'TSEV, K.A., red.; SAFONOV, Yu.F.~~, red.~~; SIVOKON', P.Ye., red.; SOKOLOVSKAYA, T.A., red.; LAZAREVA, L.V., tekhn. red.

[Marxism-Leninism and the natural sciences]Marksizm-leninizm i estestvoznanie. Red. kollegiia: K.A.Novosel'tsev, IU.F.Safonov, i P.E.Sivokon'. Moskva, Izd-vo Mosk.univ., 1962. 351 p. (MIRA 15:9)

1. Sotrudniki kafedry dialekticheskogo i istoricheskogo materializma estestvennykh fakul'tetov Moskovskogo gosudarstvennogo universiteta (for Novosel'tsev, Safonov, Sivokon').
(Communism and science)

SAFONOV, Yu.G.

"Meopta," a special type of geological compass. Geol.rud.mestorozh. no.5:99-100 S-O '62. (MIRA 15:12)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhmii AN SSSR.
(Compass)

86061

18.8200 1418, 1146, 1454
18.9210

S/180/60/000/005/002/033
E111/E135

AUTHORS: Grigorovich, V.K., and Safonov, Yu.S. (Moscow)

TITLE: Relation of Heat-Resistance and Creep of Alloys to the Phase Diagrams 26

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1960, No.5, pp. 38-46

TEXT: The object of the present work was to find the relation of short-time strength and creep to the form of phase diagram for zirconium-base alloys with transformation of peritectoidal or 27 eutectoidal type of with continuous series of α and β solid solution. Binary alloys with 0.1-5 atomic % Sn, Ni, Fe and Cr and with 1-99 atomic % Ti were studied. Alloys were 27 are 27 melted 27 in 27 argon, purified with a 27 zirconium getter. The ingots were remelted three times with inversion to secure good uniformity and then forged into 7-8 mm diameter bars. These were vacuum annealed and made into specimens for short-time tensile and creep testing. For the former (at 500, 600 and 700 °C) a type РМ-500 (RM-500) machine was used with an argon atmosphere. For tensile creep testing at 500, 600 and 700 °C a type ЦКТИ-750 (TsKTI-750) machine, with provision for an argon atmosphere, was used. Creep under

Card 1/3

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S/180/60/000/005/002/033
E111/E135

Relation of Heat-Resistance and Creep of Alloys to the Phase Diagrams

bending loads was effected in vacuum at 500 and 600 °C. Fig.1 shows the relevant phase diagrams while the remaining figures show plots of the experimentally determined properties against atomic % of the alloying element. Figs 2-6 show the mechanical properties in the left-hand graphs and the creep rate (1 kg/mm^2 for 100 hr) with the relevant section of the phase diagram in the right. Fig.7 shows the deflection produced in 24 hours, in the bend creep test. Fig.8 shows the hardness of Zr-Ti after various hardening and heat treatment conditions; Fig.9 the high temperature mechanical properties, and Fig.10 the creep rate. The hardness at 20 °C and creep rate at 700 °C for the binary alloys with tin, nickel, iron and chromium rises continuously with alloying element content; in Zr-Ti the 20 °C hardness and 500 °C creep rate attain a maximum at 50-70 atomic % Ti. Creep rate in eutectoidal-transformation systems is minimal at concentrations corresponding to solid solutions of nickel, iron or chromium in α-zirconium with a considerable content of intermetallic phase; maximal in alloys

X

Card 2/3

86061
S/180/60/000/005/002/033
E111/E135

Relation of Heat-Resistance and Creep of Alloys to the Phase Diagrams

close to the eutectoidal composition. In the peritectoidal Zr-Sn system creep rate falls continuously with increasing tin content. In Zr-Ti creep rates in the β solid solution range are minimal for alloys with 5-10 atomic % Ti and 5-1 atomic % Zr; maximal for the alloy with 50 atomic % Ti. Creep rate is influenced by the temperature at which the high-temperature phase exists, whose effect is modified by plastic deformation. There are 10 figures and 13 references: 12 Soviet and 1 English.

X

Card 3/3

ACCESSION NR: AT4013942 S/2659/63/010/000/0156/0163

AUTHOR: Grigorovich, V. K.; Safonov, Yu. S.

TITLE: High temperature chromium-iron and copper-iron alloys

SOURCE: AN SSSR. Institut metallurgii. Issledovaniya po zharoprochny*m splavam, no. 10, 1963, 156-163

TOPIC TAGS: heat resistance, chromium, iron, copper, chromium iron alloy, copper-iron-alloy

ABSTRACT: Previously, the heat resistance of chromium-iron alloys was investigated by centrifugal bending. It was found that the heat resistance increased smoothly as the chromium content increased at 650C. The heat resistance of these alloys with a chromium content from 2.5% to 10% was high. The present investigation concerned the effect of approaching the line of $\alpha - \gamma$ transformation on heat resistance and creep of chromium-iron alloys. The copper-iron alloy was also chosen for investigation as it is similar to

Card 1/2

ACCESSION NR: AT4013942

carbon, nitrogen, zirconium, and rhenium alloys. The alloys tested contained 99.7% pure iron, electrolytic chromium and 99.7% pure copper (with 0.03% C). The paper concludes that the strength of chromium-iron and copper-iron alloys drops rapidly and creep increases as the temperature rises above 500-600C. This is the same as for steel. Iron alloys with 8% Cr, corresponding to the minimum of the γ-curve at 20C have a high-strength and a low-creep rate. When the temperature rises to 600-800C, the strength drops to a minimum and the creep rate prior to the α-γ transformation is highly developed. The copper-iron alloy in a highly dispersed condition has a strength minimum at 600C and 700C, and it has the highest creep rate. The minimal strength and maximum creep rate of iron alloys with 3.5% Cu and with 8% Cr near the temperature of the α-γ transformation is due to the low surface tension at the Fe/Cu and Fe_α/Fe_γ boundaries and the maximum values of these boundaries for the mentioned alloys. Orig. art. has: 5 figures.

ASSOCIATION: Institut metallurgii AN SSSR (Institute of Metallurgy AN SSSR)

SUBMITTED: 00 DATE ACQ: 27Feb64 ENCL: 00

SUB CODE: MM NO REF SOV: 004 OTHER: 001

L 40801-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD
ACCESSION NR: AP4047877 S/0279/64/000/005/0132/0136

20
B

AUTHOR: Grigorovich, V. K. (Moscow); Safonov, Yu. S. (Moscow)

TITLE: Investigation of the creep of alloys of the iron-copper system

SOURCE: AN SSSR. Izvestiya. Metallurgiya i gornoye delo, no. 5, 1964, 132-136

TOPIC TAGS: iron copper alloy, creep, phase diagram

ABSTRACT: The creep of eutectoid type alloys of the iron-copper system (containing 0.1-6 at.% Cu) was examined in the 600-900C range, noting the change of the low density body-centered cubic (bcc) α-modification of iron to the denser and stronger face-centered cubic (fcc) γ-modification (see fig. 1 of enclosure). The rate of uniform creep of the Fe-Cu alloys, tested for 100 hours under 1 kg/mm^2 loading, increased sharply as the temperature was increased from 600 to 800C, and the increase was more pronounced as the Cu content approached the eutectoid of 3.5 at.%. At 600-700C the creep rate decreased at first as the Cu content increased from 1-2.5 at.%, then the rate increased to a maximum at the

Card 1/2

L 40801-65
ACCESSION NR: AP4047877 0

eutectoid composition, and again decreased with higher Cu content. The 800 C isotherm was similar. The transition of alloys containing 2.5-3.5 at.% Cu to the austenitic state as the temperature was increased to 850-900C lead to a certain decrease in the creep rate due to the denser packing of the γ-solid solution. Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 16Sep63 ENCL: 01 SUB CODE: MM

NR REF SOV: 008 OTHER: 000

Card 2/3

SAFONOV-CHABOVSKIY, M.G., aspirant

Amyloidosis of the internal organs in pulmonary tuberculosis. Probl. tub. 38 no.3:63-68 '60. (MIRA 14:5)

1. Iz kafedry tuberkuleza (zav. - zasluzhennyy deyatel' nauki prof. F.V.Shebanov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.
(TUBERCULOSIS) (AMYLOIDOSIS)

ASEYEV, D.D., prof.; AL'TSHULER, N.S., kand.med.nauk; SAFONOV-CHABOVSKIY, M.G.; VINOGRADOVA, R.G., kand.med.nauk

Clinical recovery of adult pulmonary tuberculosis patients. (MIRA 17:9)
Probl. tub. 41 no.10:15-21 '63.

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - kand.med.nauk T.P.Mochalova, zamestitel' direktora po nauchnoy chasti-prof. D.D.Aseyev) Ministerstva zdravookhraneniya RSFSR.

SAFONOVA, A.A.; LUKASH, Ye.V.

Rapid method for determining nitrogen oxides in concentrated sulfuric acid of wet catalysis. Koks i khim. no.8:51 '63.

1. Rutchenkovskiy koksokhimicheskiy zavod.
(Nitrogen oxides) (Sulfuric acid)
(Catalysis)

SAFONOVA, A. D.

Dissertation: "The Effect of Bromine, Caffeine, Phenamine, and Certain Combinations of These Substances on Organisms." Cand Med Sci, Second Moscow State Medical Inst imeni I. V. Stalin, 25 Jun 54. (Vechernyaya Moskva, Moscow, 16 Jun 54)

SO: SUM 318, 23 Dec. 1954

KUZNETSOVA, T.F.; SAFONOVA, A.D.

Characteristics of the action of erysimine under conditions of experimental hypoxia. Farm.i toks. 24 no.6:723-726 N-D '61. (MIRA 15:11)

1. Kafedra farmakologii (zav. - prof. V.P.Govorov) Omskogo meditsinskogo instituta imeni M.I.Kalinina.
(CARDIAC GLYCOSIDES) (ANOXEMIA)

LEBEDEVA, N.N., nauchnyy sotrudnik; SAFONOVA, A.I., nauchnyy sotrudnik;
KORNEV, I.V., nauchnyy sotrudnik; STEPANOVA, Z.S., nauchnyy
sotrudnik; SHIPOV, M.G.

Reducing the wear of spindle pins due to the continuous lubricant filtration in their bushings. Tekst. prom. 25 no.4:69-71 Ap '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut legkogo i tekstil'nogo mashinostroyeniya (for Lebedeva, Safonova, Kornev).
2. Ivanovskiy energeticheskiy institut im. Lenina (for Stepanova).
3. Nachal'nik energotsekha Krasnovolzhskogo khlopchatobumazhnogo kombinata (for Shipov).

SAFONOVA, A. M.

SAFONOVA, A. M. -- "The Development of Economically Valuable Signs in the Hybridization of Breeds of Silkworms." Min Higher Education USSR. Tashkent, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences). Tashkent Agricultural Inst.

So.: Knizhnaya Letopis', No. 6, 1956.

1. SAFONOVA, A. M.

2. USSR (600)

4. Viticulture

7. Rapid shaping of grape vines on the "Goriachevodskii" State Farm. Vin. SSSR 13, No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

SAFONOVA, A.M.

USSR/Cultivated Plants - Fruits and Berries. M-5

Abs Jour : Ref Zhur - Biol., No 3, 1958, 11024

Author : Safonova, A.M.
Inst : -
Title : Speeding Up the Formation of Grape Bushes.

Orig Pub : Vinodeliye i vinogradarstvo SSSR, 1956, No 4, 33-35

Abstract : On the "Goryachevodskiy" Sovkhoz of the Don Champagne Combinat over an area of 135 hectares, in the summer of 1952, the formation of two-year old bushes was speeded up by pinching off the 3-5 shoots left after the cutting at an early date (25 May- 10 June) and then thinning out the first and second rows of off shoots. They were fertilized with superphosphate and saltpeter. When the bushes were three years old (1953), the yield was 2½ times as great as on the control. A positive effect was also achieved (on the foru- and five-year old bushes) through formation of a supplementary sleeve at the expense of

Card 1/2

L 47461-66 EWT(1) GW

ACC NR: AT6032031 SOURCE CODE: UR/3225/64/000/010/0004/0034

30

B+1

AUTHOR: Landyreva, N. S. (Group leader); Karpova, T. B.; Safonova, A. M.; Ul'yashina, V. A.

ORG: none

TITLE: Seismology bulletin of the network of permanent seismological stations of the USSR

SOURCE: AN SSSR. Institut fiziki Zemli. Seysmologicheskiy byulleten' seti opornykh seysmicheskikh stantsiy SSSR, no. 10, Oct. 1964. Moscow, 1965, 4-34

TOPIC TAGS: seismology, earthquake, seismologic station, epicenter, origin time, seismicity, seismographic record

ABSTRACT: The present bulletin provides the data on earthquakes recorded by permanent seismological stations in the Soviet Union during October 1964. It has been prepared by the Seismology Service Department of the Institute of Physics of the Earth of the Academy of Sciences USSR. The bulletin consists of sections I and II, each of which is subdivided into subsections a and b. The data in subsections Ia and Ib include the origin time of the earthquakes (Greenwich time), the epicenter, class of accuracy (for class A and class B earthquakes the error in determining the epicenter does not exceed 25 and 50 km, respectively), the magnitude determined from the

Card 1/2

L 47461-66

ACC NR: AT6032031

surface waves, and the region where the earthquake occurred. Subsections Ib and IIb contain the detailed data on the earthquakes: wave arrival time at the various permanent seismological stations, direction of displacement, i.e., compression or rarefaction, maximum amplitudes of ground vibration and the corresponding period and the distance to the epicenter. Section Ia contains data on earthquakes within the USSR, excluding the Soviet Far East, with M ≥ 4, and the data on earthquakes in the Soviet Far East and the regions bordering the Soviet Union (up to 200 km from the border) with M ≥ 5.5. Subsection Ib contains the data on earthquakes within the USSR, excluding the Soviet Far East, with M ≥ 4.5 and the data for Soviet Far East, regions bordering the Soviet Union, and the Kurile-Kamchatka arc with M ≥ 5.5. Section II contains the data on distant earthquakes. Subsection IIa contains the data on earthquakes in Europe and Asia with M ≥ 5 and the data on earthquakes in the rest of the world with M ≥ 5.5. Subsection IIb contains more detailed data on earthquakes in Europe and Asia with M ≥ 5.5 and the data on earthquakes in the rest of the world with M ≥ 6. A list of permanent seismological stations, the data from which were used in the bulletin, includes their geographic location, type of instruments used, and the addresses of the institutes; it is published twice a year in issues number 1 and 7. A special issue published annually contains detailed data on parameters and frequency-amplitude characteristics of the instruments. Orig. art. has: 4 tables. [BA]

SUB CODE: 08/ SUBM DATE: none

Card 2/2

KAMENEVA, T.I.; SAFONOVA, A.N.

Course of pneumonia in infants in relation to the type of pathogen and antibacterial therapy. Vop. okh. mat.i det. 6 no.7:7-12 Jl '61. (MIRA 14:8)

1. Iz kafedry pediatrii (zav. - dotsent N.I.Kuptsov) i kafedry mikrobiologii (zav. - prof. B.I.Kurochkin) Astrakhanskogo meditsinskogo instituta (dir. - kand.med.nauk I.N.Alamdarov) i laboratorii Oblastnoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach I.I. Troitskiy).

(PNEUMONIA)

SAFONOVA, N.I., assistent

Efficiency of organizing mixed brigades in building. Nauch.dokl.vys. shkoly; stroi. no.4:285-291 '58. (MIRA 12:7)

1. Rekomendovana kafedroy ekonomiki, organizatsii i planirovaniya Moskovskogo inzhenerno-ekonomicheskogo instituta imeni S. Ordzhonikidze.

(Construction industry)

SAFONOVA, E.I., inzh.-ekonomist

Increasing labor productivity by a better work organization.
Trudy MIEI no.14:445-450 '59. (MIRA 13:1)

1. Moskovskiy inzhenerno-ekonomicheskiy institut.
(Construction industry--Labor productivity)

5(3)

SOV/62-58-12-15/22

AUTHORS: Belikov, V. M., Mayranovskiy, S. G., Safonova, E. N., Novikov, S. S.

TITLE: Heat of Hydration of 2-Nitro-Pyrrole (Teplota gidratatsii 2-nitropirrola)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 12, pp 1488-1489 (USSR)

ABSTRACT: In the present paper the authors mention briefly that the hydration of 2-nitro-pyrrole was immediately proved by measuring the heat effect. It was found that in the transition from glacial acetic acid solutions to diluted acetic acid solutions the displacement of the absorption spectrum taking place in the ultraviolet 2-nitro-pyrrole spectrum is connected with the hydration of molecules of the dissolved substance. It is accompanied by a heat effect of -1.5 to -1.7 kcal/mol. In the course of the investigation the mixing heat of acetic acid with water at 21-22° and at a concentration of 25-35% was measured. This heat is equal to zero if the content of acetic acid is 28% of the final mixture. There are 1 figure, 1 table, and 4 references, 2 of which are Soviet.

Card 1/2

Heat of Hydration of 2-Nitro-Pyrrole SOV/62-58-12-15/22

ASSOCIATION: Institut organicheskoy khimii imeni N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy Academy of Sciences, USSR)

SUBMITTED: May 16, 1958

Card 2/2

5(3)
AUTHORS: Safonova, E. N., Belikov, V. M., Novikov, S. S. SOV/62-59-6-30/36

TITLE: Some Reactions of the Nitropyrroles Associated With the Mobility of the N-H Bond (Nekotoryye reaktsii nitropirrolov, svyazannyye s podvizhnost'yu svyazi N-H)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 6, pp 1130 - 1132 (USSR)

ABSTRACT: In a previous paper by the authors (Ref 1) it was found that the nitropyrroles, which do not have a substituent on the hydrogen, are acids, and that their acidity depends on the nitro groups bound to the pyrrole ring. (2-nitropyrrole weakly acid, 2,4-nitropyrrole stronger acid, and 2,5-nitropyrrole=acid). If, as is assumed, the chemical activity of the nitropyrroles is connected with the mobility of the hydrogen atoms in this compound, the change in chemical activity must depend on the dissociation constants of the nitropyrroles. In order to prove this, the formation of salts, the cyano-ethylation, and the methylation of the pyrroles mentioned was investigated. It was shown that all three nitropyrroles form stable sodium salts, while the ammonium salts are unstable. The hydracine salt of 2-nitropyrrole could not be produced, the other two pyrroles formed normal hydrazine salts. When put into diluted

Card 1/3

sulphuric acid all salts were again decomposed into the initial products. With the cyanoethylation it showed that the more acid the nitropyrrole, the more acid a catalyst had to be used for the reaction. (Catalysts in the order of the nitropyrroles mentioned: CH_3ONa, CH_3COOK, CH_3COOH). Methylation of the 2,5-dinitropyrrole by dimethylsulphate occurred less readily than with the two other pyrroles. The N-H bond which, in dependence on its mobility, is able to react in the aforementioned manner, is also responsible for the motion of the hydrogen atoms of the methyl group, of the alcohols, or of the carboxylic acid. The character of the atom to which the hydrogen is bound is of minor importance. In the experimental part the syntheses of the different salts, and of the cyanoethylated and methylated compounds of the nitropyrroles mentioned are described in detail. For some of the compounds synthetized, the bacterio-static activity was determined in the VNIKhFI (Vsesoyuzuyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni Ordzhonikidze (All-Union Chemicopharmaceutical Scientific Research Institute imeni Ordzhonikidze)) by Professor N. G. Pershin to whom the authors therefore express their gratitude.

Some Reactions of the Nitropyrroles Associated With the Mobility of the N-H Bond SOV/62-59-6-30/36

There are 2 Soviet references.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: December 8, 1958

Card 3/3

5(3) SOV/62-59-7-22/38

AUTHORS: Safonova, E. N., Belikov, V. M., Novikov, S. S.

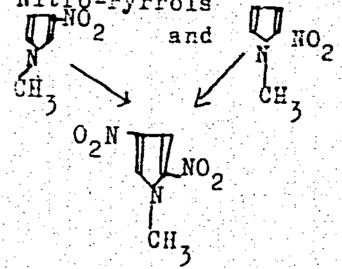
TITLE: An Investigation of Nitro-Pyrrols (Issledovaniye v oblasti nitropirrolov). Communication 2. Synthesis of Some Nitro-Pyrrols (Soobshcheniye 2. Sintez nekotorykh nitropirrolov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 7, pp 1307 - 1311 (USSR)

ABSTRACT: In a preceding paper a N-methyl-derivative of the configuration N-methyl-3,4-dinitro-pyrrol was obtained from the authors by a new method of synthesis. The anti-synthesis of this substance was not possible. Therefore, some other mono- and dinitro-pyrrols with or without N-substituents were synthesized and their chemical qualities and ultraviolet spectra were compared with those of the substances in the above named paper. In the table the data of all nitropyrrols are represented which are described in other publications (Refs 1-4). Some methods of the synthesis of nitro-pyrrols, which are described in publications are indicated (Refs 3,5,2). Like the scheme besides N-methyl-2,4-dinitropyrrol

Card 1/2

An Investigation of Nitro-Pyrrols. Communication 2. Synthesis of Some Nitro-Pyrrols SOV/62-59-7-22/38



2-nitro-pyrrol,2,4- and 2,5-dinitro-pyrrol were got now by nitrification and methylation, which were not yet described in other papers. The used method of nitrification by Rinkes, obtaining 2-nitro-pyrrol, was changed and improved in some points. In the experimental part the syntheses are described in detail. There are 6 figures, 1 table, and 7 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: September 30, 1957

Card 2/2

5(3), 5(4) SOV/62-59-8-16/42

AUTHORS: Novikov, S. S., Belikov, V. M., Yegorov, Yu. P., Safonova, E.N., Semenov, L. V.

TITLE: Investigations in the Field of Nitropyrroles. Communication 3. Ultra-viclet Absorption Spectra and Tautomeric Transformations of Some Nitropyrroles

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 8, pp 1438-1444 (USSR)

ABSTRACT: In the present paper the ultra-violet spectra of 8 nitropyrroles are investigated. The bands of the various compounds are given in table 1 and shown in the figures. The spectra were interpreted as indicating that the position of the NO_2 group in the pyrrole nucleus can be determined by means of the ultra-violet spectrum. The already supposed structure of 1-methyl-3,4-dinitropyrrole (Ref 1) could be proved. The tautomeric phenomena were investigated in a series of derivatives not substituted at the nitrogen of nitropyrrole and it could be shown that the acidity of these compounds increases with the increasing number of nitro groups. The same effect could be observed by regrouping the nitro group from position β into α. This phenomenon was considered an inductive effect

Card 1/2

SOV/62-59-8-16/42

Investigations in the Field of Nitropyrroles. Communication 3. Ultra-violet Absorption Spectra and Tautomeric Transformations of Some Nitropyrroles

of the nitro group on the polarization of the N-H bond. There are 6 figures, 1 table, and 17 references, 6 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: November 30, 1957

Card 2/2

NOVIKOV, S.S.; SAFONOVA, E.N.; BELIKOV, V.M.

Chemistry of nitropyrroles. Report No.5: Synthesis of substituted derivatives of dinitropyrroles. Izv.AN SSSR.Otd. khim.nauk no.6:1053-1056 Jl '60. (MIRA 13:7)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR.

(Pyrrole)

43219

S/020/62/147/003/024/027
B101/B186

5 2410

AUTHORS: Mikhaylov, B. M., Vasil'yev, L. S., Safonova, E. N.

TITLE: Conversion of cyclic boron compounds under the action of methyl borate

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 3, 1962, 630 - 633

TEXT: The following reactions are described: (1) Di-1,4-(1-boracyclopentyl)-butane (I) and methyl borate (molar ratio 1:1) were boiled for 1.5 hrs in the presence of tetra-n-propyl diborane, then kept at 130 - 135°C for another 1.5 hrs, and fractionated; thereby 80.5% 1-methoxy-boracyclopentane (II), b.p. 40.5 - 41.0°C 83 mm Hg, d_4^{20} 0.8421, n_D^{20} 1.4172, was obtained as well as the by-product 1.6-dimethoxy-1,6-diboracyclodecane (III), b.p. 69.5 - 70.0°C/2.5 mm Hg, d_4^{20} 0.9055, n_D^{20} 1.4538. (2) Boiling of II with methyl borate in the presence of tetra-n-propyl diborane yielded 71.5% tetramethyl ester (IV) of butane-1,4-diboric acid, b.p. 54 - 56°C/2.5 mm Hg,

Card 1/3

S/020/62/147/003/024/027
Conversion of cyclic boron ... B101/B186

n_D^{20} 1.4175, and methyl ester (V) of di(4-dimethoxy boryl butyl)-boric acid, b.p. 116 - 120°C/2 mm Hg, n_D^{20} 1.4360. The compounds IV and V were also obtained by reaction between I and methyl borate at a ratio 1 : 5. (3) Interesterification of IV and n-hexanol yielded 98.5% tetra-n-hexyl ester (VI) of butane-1,4-diboric acid, b.p. 198 - 200°C/1.5 mm Hg, d_4^{20} 0.8667, n_D^{20} 1.4402. (4) 72.4% 1-n-hexoxy-boracyclopentane (VII) b.p. 44 - 45°C/2mm Hg, d_4^{20} 0.8386, n_D^{20} 1.4382, and tri-n-hexyl borate, b.p. 129 - 133°C/2.5 mm Hg, n_D^{20} 1.4270 were obtained by keeping VI for 1.5 hrs at 270 - 300°C. The compounds II and VII polymerized when left standing; but the polymer so formed, decomposes again when heated. (5) The reaction of diborane with diallyl dissolved in ether (ratio 1 : 4) yielded di-1,6-(1-boracycloheptyl)-hexane and 6-(1-boracycloheptyl)-hexene-1, b.p. 57 - 59°C/3 mm Hg, d_4^{20} 0.8214, n_D^{20} 1.4630 in almost equimolecular ratios. (6) 81% 1-methoxy boracyclopentane (X), b.p. 42 - 43°C/15 mm Hg, d_4^{20} 0.864, n_D^{20} 1.4391, was

Card 2/3

Conversion of cyclic boron ...

S/020/62/147/003/024/027
B101/B186

obtained by heating VIII and methane (ratio 1 : 1) in the presence of tetra-n-propyl diborane. The same reaction (ratio 1 : 5) yielded equimolar amounts of X and tetramethyl ester (XI) of hexane-1,6-diboric acid, b.p. 82 - 84°C/1.5 mm Hg, d_4^{20} 0.9325, n_D^{20} 1.4252. XI was also obtained by reaction of X and methyl borate. The English-language reference is: K. Saegebarth, J. Am. Chem. Soc., 82, 2082 (1960).

PRESENTED: July 17, 1962, by B. A. Kazanskiy, Academician

SUBMITTED: July 12, 1962

Card 3/3

MIKHAYLOV, B.M.; SAFONOVA, E.N.

Action of tetra-n-propyldiborane on n-butylvinyl ether and allylboric and allylthioboric acid esters. Izv. AN SSSR. Ser. khim. no.8:1487-1489 '65. (MIRA 18:9)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

SAFONOVA, G.A.;SVETNIK, Z.Yu.

Viscero-sensory disorders in the small pelvis in injuries of the mid-brain. Akush. gin., Moskva no.5:77-80 Sept-Oct 1952. (CLML 23:2)

1. Candidate Medical Sciences for Safonova; Docent for Svetnik.
2. Of the Clinic for Nervous Diseases (Head -- Prof. G. D. Leshchenko), Khar'kov Medical Institute.

SAFONOVA, G.A.; SVETNIK, Z.Yu.

Cerebrospinal hypertensive syndrome in hypertension. Sovet. med. 16 no. 6:24-26 June 1952. (CLML 22:4)

1. Candidate Medical Sciences for Safonova. 2. Of the Department of Nervous Diseases (Head -- Prof. G. D. Leshchenko), Khar'kov Medical Institute.

SVETNIK, Z.Yu; SAFONOVA, G. A.

Respiratory disorders in damages of the mid-brain. Klin. med., Moskva 30 no.3:41-44 Mar 1952. (CLML 22:2)

1. Docent for Svetnik; Candidate Medical Sciences for Safonova.
2. Of the Clinic for Nervous Diseases (Director -- Prof. G. D. Leshchenko), Khar'kov Medical Institute.

85163

S/139/60/000/005/013/031
E073/E535

6,3100 (also 2201, 2801)

AUTHORS: Zuev, V. Ye., Elyashberg, M.Ye. and Safonova, G.A.

TITLE: Transparency of Thin Atmospheric Layers in the Range 1 to 13 microns

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.5, pp. 77-81

TEXT: In most work published until now two approximate laws of attenuation are applied, one is the exponential law, the other the square root law. It is of interest to make use of the available experimental material to choose analytical expressions which would approximate satisfactorily the attenuation law. Of particular interest are investigations for small values of w (depth of the water layer) of the order of 10^{-5}, 10^{-3} cm, since it is particularly for this range of values that the formation of the basic absorption bands is most intensive. Investigation of the spectral integral transparency of thin layers of the atmosphere is of interest due to the fact that in measuring the absolute transparency over large distances it is usually assumed, without adequate justification, that absorption of the radiation in the reference channel over a

Card 1/5

86163

S/139/60/000/005/013/031
E073/E535

Transparency of Thin Atmospheric Layers in the Range 1 to 13 microns

distance of a few metres can be disregarded. The aim of the work described in the paper was to elucidate the possibility of application of these laws to the attenuation of infrared radiation for w between 10^{-5} and 10^{-3} cm and also to obtain quantitative data on the spectral and integral transparency of thin atmospheric layers, up to 3 m in the range of 1 to 13 microns. All the investigations were carried out on an ИКС-6 (IKS-6) spectrometer with NaCl prisms, an amplifier and recording equipment. To eliminate water vapour and CO_2 from the path of the radiation beam between the source and the thermocouple, the light source and the cuvette of the spectrometer were evacuated, the monochromator and other parts of the path were blown through with dry nitrogen. Thus, water vapour and CO_2 were completely eliminated from the path of the beam and it was possible to record the total transparency curve or the spectral curve of radiation from the source for spacings between 5 and 300 cm. From the curve of the total transparency and the absorption curves for the various distances, it was possible to determine the transparency curve. Two series of measurements were made, in the first one

Card 2/5

85163

S/139/60/000/005/013/031
E073/E535

Transparency of Thin Atmospheric Layers in the Range 1 to 13 microns

absorption spectra of atmospheric water vapours and CO_2 were measured for spacings of 5, 20, 40, 60, 235, 255, 275 and 300 cm for a given absolute humidity. In the second series the absorption of the radiation was measured for a fixed spacing of 2.35 m for absolute humidities of 7.5, 10.12 and 14.5 millibars; the magnitude of the precipitated water varied between 10^{-5} and 2.5×10^{-3} cm. All the spectrum recordings were for the range 1 to 13 microns under laboratory and natural atmospheric conditions. No absorption was detected in the range 8 to 13 microns, which is fully in accordance with literary data (Ref.3). To verify the possibility of application of the exponential law and the square root law for expressing the attenuation of infrared radiation, graphs of $\ln T$ versus w and T versus $\sqrt{w}$ were plotted for all the peaks of the absorption bands 2.7 and 6.3 microns, which are due to water vapour ($T = 1-A$ is the transparency for the peak under consideration). It was found that in the range 10^{-3} to 2.5×10^{-3} cm the attenuation can be satisfactorily described by the exponential law as well as by the square root law. If w drops below 10^{-3} cm, the exponential law will no longer be fulfilled and the same applies to the square root law from a value of

Card 3/5

85163

S/139/60/000/005/013/031
E073/E535

Transparency of Thin Atmospheric Layers in the Range 1 to 13 microns

$w \cong 5 \times 10^{-4}$ cm. Additional experimental data will be required for deriving an analytical expression which approximates satisfactorily the behaviour of attenuation for layers thinner than 10^{-4} cm. The spectral transparency curves were plotted for various quantities of precipitated water in the range of 1 to 8 microns. This range can basically be sub-divided into two spectral ranges of 1 to 4 microns and 4 to 8 microns. In the first range absorption is basically at 2.7 microns, in the second range there is a wide absorption band with a centre at 6.3 microns for water vapours and a band at 4.3 microns for CO_2. It can be seen from the curves that to disregard the absorption of radiation along a few metres and even along fractions of a metre is permissible only for well defined spectral ranges but not for the entire spectral range. Laboratory results are compared with results obtained under natural conditions. A new clearly pronounced water vapour absorption band was observed in the range 2.5 to 3.3 microns, which is due to some absorption agent in the free atmosphere. In spite of some differences in the spectra obtained under laboratory and under natural conditions, the

Card 4/5

85163

S/139/60/000/005/013/031
E073/E535

Transparency of Thin Atmospheric Layers in the Range 1 to 13 microns

integral absorption measured under laboratory conditions differed only slightly from those measured under natural conditions. There are 3 figures, 1 table and 3 references: 1 Soviet and 2 English.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuybysheva (Siberian Physics and Engineering Institute, Tomsk State University imeni V. V. Kuybyshev)

SUBMITTED: December 24, 1959

Card 5/5

SAFONOVA, G. I.

"Investigation of the Process of Deposition on the Piston of a Tractor Engine in Respect to the Properties of the Lubricating Oil." Thesis for degree of Cand. Technical Sci., Sub 8 Jun 49, Moscow Inst for Mechanization and Electrification of Agriculture imeni V. M. Molotov.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

SOV/9-59-2-12/16

3(8)

AUTHORS: Mileshina, A.G., Safonova, G.I., and Kanayeva, N.A.

TITLE: The Effect of the Mineralogical Composition of Rocks on the Percolating Oil (Vliyaniye mineralogicheskogo sostava porod na fil'truyushchuyusya cherez nikh neft')

PERIODICAL: Geologiya nefti i gaza, 1959, Nr 2, pp 55-60 (USSR)

ABSTRACT: The effect of the mineralogical composition of rocks on oil penetration was already studied by P.P. Avdusin, V.P. Baturin, M.A. Tsvetkova and others. The effect of the mineralogical composition of rocks on the composition of percolated oil was examined by experiments in laboratory conditions with the use of artificial mineral mixtures. The experiments are described and results obtained are given in tables presenting data on the quantitative content and composition of oil sorption determined by the method of luminescence analysis (V.N. Florovskaya); data on elementary and combined analyses of oil filters and group composition of oil fraction (N.A. Kanayeva); and data on structural group analyses of the naphthene-paraffin and the aromatic group of hydrocarbons. It was stated that the mineralogical composition of rocks had an effect on

Card 1/2

MILESHINA. A.G.; SAFONOVA, G.I.

Effect of flow on the composition of petroleums. Trudy VNIGNI no.17:217-226 '59. (MIRA 13:1)
(Petroleum geology)

MILESHINA, A.G.; SAFONOVA, G.I.

Changes in the chemical composition of petroleums caused by the adsorptive properties of clay rocks. Geol. nefti i gaza 7 no.8: 7-10 Ag '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva.

SAFONOVA, G. L. Cand. Tech. Sci.

Dissertation: "Investigation of the process of Deposition and the Piston of a Tractor Engine in Respect to the Properties of the Lubricating Oil."

8 Jan. 49

Moscow Inst. for Mechanizatian and Electrification of Agriculture
imeni V. M. Molotov

SO Vecheryaya Moskva
Sum 71

NAKHAPETYAN, L.A.; SAFONOVA, I.A.; KAZANSKIY, B.A.

Reaction of isoprene with methylene iodide and a zinc-copper couple.
Izv. AN SSSR. Otd.khim.nauk no.5:902-905 My '62. (MIRA 15:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Isoprene) (Methane)

SAFONOVA, I.A.; SKINDER, I.B.

Investigating fluids for modern telescopic shock absorbers.
Avt. prom. 30 no.10:25-28 O '64. (MIRA 17:11)

1. TSentral'nyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.

SAFONOVA, I.L.

7

Reaction of cyclopentadiene with 1-heptene and butenes. A. F. Plate and I. L. Safonova (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 105, 989-92(1955).—Heating an equimolar mixt. of 1-heptene and cyclopentadiene (dicyclopentadiene used in the expts. depolymerized under the conditions used) in a steel bomb 13 hrs. at 220-30° gave 17.7% 5-amylbicyclo[2.2.1]hept-2-ene, b$_{14}$ 94.5°, n^{20}_{D} 1.4652, d_{20} 0.8620, which hydrogenated over Raney Ni to 2-amylbicyclo[2.2.1]heptane, b$_{748}$ 214.3°, 1.4612, 0.8538. Heating cyclopentadiene with butenes (from dehydrogenation of BuOH over Al_2O_3) 13 hrs. at 180-90°, or better 7 hrs. at 220-30°, gave 8.4% *5-ethylbicyclo[2.2.1]hept-2-ene* (I), b$_{748}$ 80.5-1°, 1.4630, 0.8699, and 0.6% *2,3-dimethylbicyclo[2.2.1]hept-5-ene*, b$_{744}$ 70.1-2.5°, 1.4578, 0.8541. The use of tech. butene (92% 2-butene, 6% 1-butene, 1.5% butadiene) gave 12% condensation products, mainly I, with a little *5,6-dimethylbicyclo[2.2.1]hept-2-ene*, b$_{42}$ 66.4-8°, 1.4576, 0.8542. Hydrogenation of I over Ni gave *2-ethylbicyclo[2.2.1]heptane*, b$_{740}$ 157.2-7.7°, 1.4589, 0.8599 (cf. Nazarov and Nagibina, *C.A.* 42, 7728*b*). The structures of the bicyclo products were confirmed by Raman spectra; the 880-905 cm.$^{-1}$ line of the 5-membered ring was evident, in regions to 1600 cm.$^{-1}$ strong sharp lines resemble those of decahydronaphthalenes, and the olefinic bond is shown by a 1571-2 line.

G. M. Kosolapoff

ALEKSANYAN, V.T.; STERIN, Kh.Ye.; LUKINA, M.Yu.; SAL'NIKOVA, L.G.; SAFONOVA, I.L.

Raman spectra of various cyclopropane hydrocarbons and conjugation of three-member ring with double bonds. Fiz. sbor. no.3:64-68 '57. (MIRA 11:8)

1. Komissiya po spektroskopii AN SSSR i Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

(Cyclopropane—Spectra) (Raman effect)

SAFONOVA, I.L.

AUTHORS: Kazanskiy, B. A., Lukina, M. Yu., Safonova, I.L., 62-1-19/29

TITLE: Hydrogenation of Phenylcyclopropane in Presence of Palladium- and Platinum Black (Gidrirovaniye feniltsiklopropana v prisutstvii palladiyevoy i platinovoy cherni)

PERIODICAL: Izvestiya AN SSSR, Otdeleniye Khimicheskikh Nauk, 1958 Nr 1, pp. 1o2 - 1o4 (USSR)

ABSTRACT: Formerly it was shown by theauthors that systems which contain a three-membered ring and a double binding (C-C or C-O) in combined state can be easily hydrolyzed by the aperture of the cycle in cold (references 1-4). In presentpaper the authors describe the hydration of thephenylcyclopropane in which the three-membered cycle is connected with the aromatic system of the double bindings. It was found that in the presence of palladium hydrogen combines with phenylcyclopropane with a velocity of 3o ml/ /min. The obtained catalysate boils in the interval of o,1° and was a separate substance (according to the constants). (tables 1 and 2). Even with great quantities of the catalyst the hydration took place 9o times slower than with palladium. It was assumed that the catalyst contained propylcyclohexane (perhaps also cyclohexylcyclopropane) which the constants of which have

Card 1/2

Hydrogenation of Phenylcyclopropane in Presence of Palladium- and Platinum Black 62-1-19/29

not yet been described in literature. There are 1 figure, 2 tables, 7 references, 5 of which are Slavic.

ASSOCIATION: Institute of Organic Chemistry imeni N. D. Zelinskiy, AS USSR (Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: July 12, 1957

AVAILABLE: Library of Congress

1. Phenylcyclopropane-Hydrogenation 2. Palladium catalyst-Applications 3. Platinum oxide catalyst-Applications

Card 2/2

AUTHORS: Kazanskiy, B. A., Lukina, M. Yu., SOV/62-58-10-24/25
Safonova, I. L., Aleksanyan, V. T., Sterin, Kh. Ye.

TITLE: Letter to the Editor (Pis'ma redaktoru)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 10, pp 1280 - 1280 (USSR)

ABSTRACT: The authors succeeded for the first time to distribute 1,2-diphenyl cyclopropane and 1-phenyl-2-cyclopropyl cyclopropane to stereoisomers. The properties were: 1,2-diphenyl cyclopropane (cis-form); boiling point 131, 6-131, 7°, (4,8mm); melting point 36,7°; n_D^{20} 1,5887; d_4^{20} 1,0290. The trans-form: Boiling point 144,1-144,2° (5,2 mm); melting point 15,3°; n_D^{20} 1,5997; d_4^{20} 1,0346; 1-phenyl-2-cyclopropyl cyclopropane: cis-form: boiling point 100,2-100,5 (11 mm); n_D^{20} 1,5330; d_4^{20} 0,9574; trans-form: Boiling point 111,3-111,5° (13,8 mm); n_D^{20} 1,5371; d_4^{20} 0,9585. The spectra of the combination dispersion

Card 1/2

Letter to the Editor SOV/62-58-10-24/25

of both stereoisomer pairs were investigated and a considerable increase of the integral intensities of the characteristic bands of the benzene ring were found. This effect proves the presence of a considerable linkage of the phenyl nuclei with the 3-membered nucleus. This linkage is less intense in the spectra of the isomers with low boiling point. The authors explain this phenomenon by the presence of steric hinderances that disturb the situation favorable to the phenyl nuclei. There are 2 references, which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im.N.D.Zelinskogo Akademii nauk SSSR i Komissiya po spektroskopii pri Otdelenii fiziko-matematicheskikh nauk Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D.Zelinskiy AS USSR and the Commission for Spectroscopy at the Department of Physical Mathematical Sciences AS USSR)

SUBMITTED: July 19, 1958

Card 2/2

SOV/51-7-2-6/34

AUTHORS: Aleksanyan, V.T., Sterin, Kh.Ye., Lukina, M.Yu., Safonova, I.L. and Kazanskiy, B.A.

TITLE: A Spectroscopic Investigation of the Effect of Mutual Orientation of Cyclopropane and Phenyl Rings on their Conjugation (Spektroskopicheskoye issledovaniye vliyaniya vzaimnoy oriyentatsii tsiklopropanovykh i fenil'nykh kolets na ikh sopryazheniye)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 2, pp 178-186 (USSR)

ABSTRACT: The paper describes results of the study of Raman spectra of stereoisomers of 1,2-diphenylcyclopropane and 1-phenyl-2-cyclopropylcyclopropane. These hydrocarbons were prepared following the technique described by Kizhner (Ref 4) and Smith and Rogier (Ref 16). Stereoisomers were separated out by fractional distillation under vacuo. The Raman spectra were recorded by means of a spectrograph ISP-51. The frequencies and intensities were measured following a technique described earlier (Ref 17). The frequency scatter did not exceed ±1 cm^{-1} and the intensity scatter was ± 10%. The integral intensities were determined by direct microphotometry of the line shape. The 802 cm^{-1} line in the spectrum of cyclohexane was used as a standard and its molar integral intensity was taken to be 500. The

Card 1/3

SOV/51-7-2-6/34

A Spectroscopic Investigation of the Effect of Mutual Orientation of Cyclopropane and Phenyl Rings on Their Conjugation

results obtained are tabulated on pp 180-1. The intensities of the lines at ~1200 and ~1600 cm^{-1} of the two compounds studied were stronger than those of alkyl benzenes; this indicates a strong conjugation of cyclopropane and phenyl rings. The conjugation is shown less clearly in the spectra of stereoisomers with lower boiling points. This is due to steric obstacles which prevent the most favourable arrangement of the phenyl rings with respect to the cyclopropane ring. Such steric obstacles exist only in cis-isomers. This circumstance was used to identify the cis- and trans-isomers of both hydrocarbons. For 1,2-diphenylcyclopropane the isomer with a boiling point of 131.6-131.7°C (4.8 mm Hg) and a freezing point of 36.7°C was identified as the cis-form, while the isomer with a boiling point of 144.1-144.2°C (5.2 mm Hg) and a freezing point of 15.3°C had the trans-form. The cis-isomer of 1-phenyl-2-cyclopropylcyclopropane had a boiling point of 100.2-100.5°C (at 11 mm Hg) and the trans-isomer

Card 2/3

SOV/51-7-2-6/34

A Spectroscopic Investigation of the Effect of Mutual Orientation of Cyclopropane and Phenyl Rings on Their Conjugation

boiled at 111.3-111.5°C (at 13.8 mm Hg). There are 2 figures, 2 tables and 21 references, 9 of which are Soviet, 8 English, 1 French, 1 German, 1 translation from English into Russian and 1 from an international journal.

SUBMITTED: September 23, 1958

Card 3/3

SAFONOVA, I. L., Cand Chem Sci -- (diss) "Investigation of a number of phenylcyclopropanes." Moscow, 1960. 10 pp; (Academy of Sciences USSR, Inst of Organic Chemistry im N. D. Zelinskiy); 110 copies; price not given; (KL, 17-60, 142)

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SOV/20-130-2-21/69

AUTHORS: Kazanskiy, B. A., Academician, Lukina, M. Yu., Safonova, I. L.

TITLE: Synthesis and Catalytic Hydrogenation of Diphenylcyclopropanes

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 2, pp 322 - 325 (USSR)

ABSTRACT: From the standpoint of modern theory, the structure of the cyclopropane ring has not been fully clarified as yet. According to several papers (Refs 1-3), the carbon atoms in cyclopropane have the same electron configuration as the C-atoms in ethylene. Various explanations of the interaction of the 6 orbits (3 sp^2 and 3 p) assume that one valence of each carbon represents an almost pure p-orbit. Thus, this valence is similar to the orbits forming the π- bond. From this point of view, the presence of a π-electron cloud in the cyclopropane ring may be assumed. According to the theory, it lies on the perimeter in the plane of the triangle (Fig 1). This cloud must make possible the conjugation of the 3-membered ring with unsaturated

Card 1/3

67356

groups such as the carbon-carbon double bond, the carbonyl group or the phenyl ring. As the conjugation can only occur if the axes of the ring and of the substituent are parallel or nearly parallel, it is evident that the steric position of several substituents decides on the higher or lower occurrence of the conjugation. It was proved recently (Refs 7,8) that the conjugation effect is differently high with two stereoisomers. The investigation of the steric models of the stereoisomers of these hydrocarbons showed that in the cis-isomers one or both of these groups are partly displaced from a position favorable to conjugation due to the close position of two substituting groups. For this reason, a cis-configuration may be ascribed to the stereoisomers with lower conjugation. Thus, it may be assumed that no conjugation must occur in 1,1-diphenylcyclopropane since both phenyl groups can only have a steric position which excludes the parallel position of the axes of their π-clouds with respect to the plane of the 3-membered ring. This assumption was confirmed experimentally by Raman spectra. In the present paper, the authors studied the reactivity of cis- and trans-

4

67356

Synthesis and Catalytic Hydrogenation of Diphenylcyclopropanes SOV/20-130-2-21/69

1,2-diphenylcyclopropane and of 1,1-diphenylcyclopropane on the example of hydrogenation in the presence of palladium black (Refs 9-12). The data obtained are in full agreement with the results of the Raman spectra. Thus, the behavior of 1,1-diphenylcyclopropane in this reaction is quite similar to that of a nonconjugated hydrocarbon. It does not absorb any hydrogen. In cis- and trans-1,2-diphenylcyclopropane, hydrogen is absorbed by two low-hydrogenized carbons of the ring. 1,3-diphenylpropane develops here (see Scheme). Steric factors also influence the rate of hydrogenation. Thus, it was proved that the reactivity of diphenylcyclopropanes depends on the steric position of the substituents. The Raman spectrum of 1,1-diphenylcyclopropane will be published shortly. There are 1 figure, 3 tables, and 16 references, 10 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: September 30, 1959

Card 3/3

KOZINA, M.P.; LUKINA, M.Yu.; ZUBAREVA, N.D.; SAFONOVA, I.L.; SKURATOV, S.M.;
KAZANSKIY, B.A., akademik

Heat of combustion of some phenylcyclopropanes. Dokl.AN SSSR 138
no.4:843-845 Je '61. (MIRA 14:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova i
Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Benzene) (Heat of combustion)

NAKHAPETYAN, L.A.; NESMEYANOVA, O.A.; SAFONOVA, I.L.; LOZA, G.V.; OVODOVA, V.A.; LUKINA, M.Yu.

Preparation of trimethylene chlorobromide. Zhur. prikl. khim. 37 no.8:1808-1811 Ag '64. (MIRA 17:11)

SAFONOVA, I.N.

✓Parmenov, K. Ya., Safonova, I. N., and Tetgrin, M. L.: Eksperimental'nye raboty uchashchikhsya po khimii v srednei shkole (Experimental Works in Chemistry in High Schools). Moscow: Izdatel'stvo Akad. Pedagog. Nauk R.S.F.S.R. 1952. 145 pp.

SAFONOVA, I. N.

Egorkin, V. F.

Manual as an aid to chemistry teachers in seven year schools ("Chemistry lessons in 7th class." V. F. Egorkin. Reviewed by I. N. Safonova). Khim. v shkole No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

SAFONOVA, I.N. (Moscow)

Current review of the knowledge, skill, and habits of students. Khim. v
shkole no.3:25-32 My-Je '53. (MLRA 6:7)
(Chemistry--Study and teaching)

SAFONOVA, I.N.

SHAPOVALENKO, S.G.; SAFONOVA, I.N.; POZDNYAKOVA, N.I., redaktor; MIRONTSEVA, M.I., tekhnicheskiy redaktor

[Current control of students' progress in chemistry; a method outline] Tekushchaia proverka uspevaemosti uchashchikhsia po khimii; metodicheskoe pis'mo. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1954. 33 p. (MLRA 8:3)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye shkol. 2. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR (for Shapovalenko) 3. Starshiy nauchnyy sotrudnik laboratorii metodiki khimii Insituta metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for Safonova)

(Chemistry--Study and teaching)

YURKOV, Georgiy Kapitanovich; ; SAFONOVA, Irina Nikolayevna;
METEL'SKAYA, G.S., red.; MAKHOVA, N.N., tekhn. red.

[Water; manual for students in the upper grades] Voda; posobie dlia uchashchikhsia starshikh klassov. Moskva, Uchpedgiz, 1962. 87 p. (MIRA 15:6)

(Water)

SAFONOVA, I.S.

Nervous complications following antirabies inoculations. Vop. psikh. i nevr. no.5:82-88 '59. (MIRA 14:5)

1. Iz nervnogo organicheskogo otdeleniya (zav. - prof. I.Ya.Razdol'skiy) Psikhonevrologicheskogo instituta imeni V.M.Bekhtereva (direktor - chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR prof. V.N.Myasishchev).

(RABIES)

SAFONOVA, I.S.

Dynamics of the changes in the motor chronaxia in patients with an acute disorder of the cerebral blood circulation. Vop. psikh. i nevr. no.9:103-110 '62.

Case of bilateral thrombosis a. a. sulcis bulbaris. Ibid.:502-504 '62. (MIRA 17:1)

1. Nervnoye organicheskoye otdeleniye (nauchnyy rukovoditel' - Kh.L. Bel'man) Leningradskogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta imeni V.M. Bekhtereva (dir. - B.A. Lebedev).

POVAROV, Yu.M.; GORBANEV, A.I.; KESSLER, Yu.M.; SAFONOVA, I.V.

Activity coefficients of cesium chloride in N-methylformamide. Dokl. AN SSSR 142 no.5:1128-1129 F '62. (MIRA 15:2)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N.Frumkinym.

(Cesium chloride)
(Formamide)
(Activity coefficients)

POVAROV, Yu.M.; KESSLER, Yu.M.; GORBANEV, A.I.; SAFONOVA, I.V.

Thermodynamic properties of solutions of strong electrolytes in solvents having high dielectric constants. Dokl. AN SSSR 155 no.6:1411-1414 Ap '64. (MIRA 17:4)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N.Frumkinym.